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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,730	08/28/2003	Junji Ando	242169US3	5708

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

RODRIGUEZ, SAUL

ART UNIT PAPER NUMBER

3681

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/649,730	<b>Applicant(s)</b> ANDO ET AL.	
	<b>Examiner</b> Saúl J. Rodríguez	<b>Art Unit</b> 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

This is a first office action on the merits of patent application S. N. 10/649,730.

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on August 2002. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

### ***Claim Objections***

Claims 1 and 5 are objected to because of the following informalities: For example, on claim 1, "relativ" should be --relative-- and on claim 5 "magne tic" should be --magnetic--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

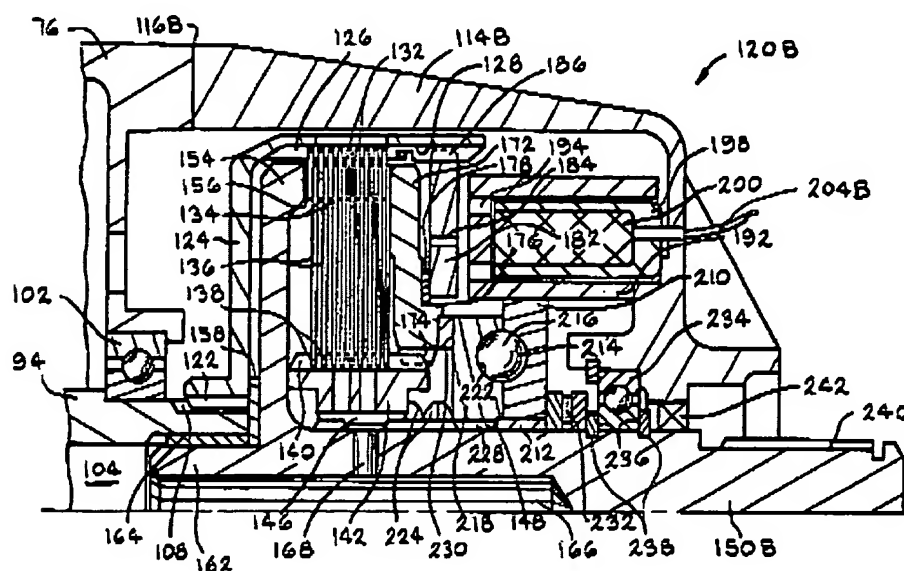
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, and 10 rejected under 35 U.S.C. 102(b) as being anticipated by Isley, Jr. ('770).

Isley discloses a drive power transmission device (Fig. 3) comprising first and second cylindrical rotary members (124, 142), a main clutch mechanism (120B), plural outer plates (132), plural inner plates (138), an electromagnetic pilot clutch (200), a pilot outer plate (182), a pilot inner plate (192), an electromagnet (200), a cam mechanism (216), a weaving electromagnetic path (Col. 6, lines 21-38), and arc slits (184, 194).



### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isley, Jr. ('770) in view of Drawl et al. ('421).

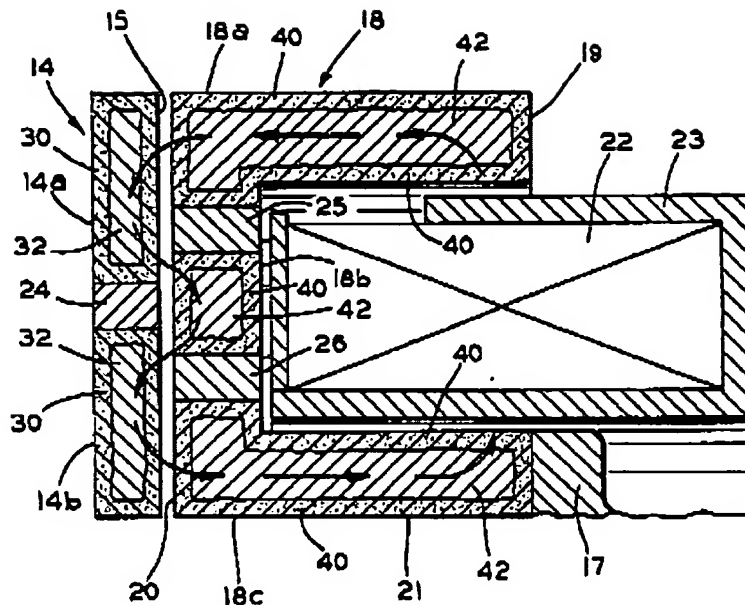
Isley does not show sliding surfaces comprising a diamond-like carbon surface.

Drawl, on the other hand, teaches a conventional DLC film for extending the life of a surface exposed to frictional contact.

Then, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to treat the friction surfaces of Isley, Jr. with a DLC surface in view of Drawl to toughen the coupling.

Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Isley, Jr. ('770) in view of Booth et al. ('421).

Isley does not show isolation members. Booth et al. on the other hand discloses conventional isolation members (24, 25, 26) for an electromagnetic clutch. Then, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide isolation members in the transmission device of Isley in view of Booth to increase the magnitude of the attraction between the electromagnetic elements.



Claims 8-9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Isley, Jr. ('770) and Drawl et al. ('421) in further view of Booth et al. ('421).

Isley in view of Drawl et al. does not show isolation members. Booth et al. on the other hand discloses conventional isolation members (24, 25, 26) for an electromagnetic clutch. Then, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide isolation members in the transmission device of Isley and Drawl et al. in further view of Booth to increase the magnitude of the attraction between the electromagnetic elements.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakahigashi et al. ('386) and Murakami et al. ('989) disclose other applications of DLC films. Rogner et al. ('115) discloses another application of a

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DLC film in an analogous art. Shafer ('980) and Aoki et al. ('759) disclose other electromagnetic clutches where the magnetic flux follow a weaving path.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saúl J. Rodríguez whose telephone number is (703) 308-7575. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (703) 308-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
SJR

  
Saúl J. Rodríguez  
Examiner  
Art Unit 3681